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COMPANY NAME	ENGINEERING STUDY [X]	
David Clark Company Incorporated	CHANGE PROPOSAL [X]	PROPOSAL NO. CDC-3
DATE 7 January 1960	AFFECTS WSPO [ ]	PROJECT [X]

NAME OF MAJOR COMPONENT	PART OR LOWEST SUBASSEMBLY	PART NO. & MODEL OR TYPE
High Altitude Pressure Suit Assembly	High Altitude Helmet	MA-2

TITLE OF PROPOSAL:

Development & Production of Helmet for Partial Pressure Suit

NATURE OF PROPOSAL:

See Attachment #1

REASON FOR PROPOSAL:

See Attachment #2

ES	ESTIMATED COST AND TIME INVOLVED: ADDITIONAL FUNDING REQUIRED:
CP	ESTIMATED COST FOR KITS OR PARTS: **See Attachment #3** ADDITIONAL FUNDING REQUIRED: **Original funding required.**

ITEMS AFFECTED BY PROPOSAL: **Kit, oxygen survival-SPQ207,270,198**

Safety	Mission Effectiveness	Performance	Operating procedure	Interchangeability	Weight & balance	Tools & support equip.	Maintenance Proced.	Servic Life	Flight Manual	Maintenance manual
[X]	[X]	[ ]	[ ]	[X]	[ ]	[ ]	[ ]	[X]	[ ]	[X] 6-2

EST. MAN/HRS. REQ'D TO ACCOMPLISH IN FIELD 2

SOURCE OF PARTS FOR KIT	AVAILABILITY ——— WEEKS AFTER APPROVAL
David Clark Company Incorporated	See Attachment #3

DISPOSITION OF SPARES AFFECTED

Returned to Air Force Depot

INITIATED BY:	APPROVED: WSPO
David Clark Company Inc.	

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Attachment #1

Nature of Proposal

a. Provide a replacement item for the Type MA-2 High Altitude Helmet without change of associated protective garments.

b. Facepiece seal and locking pneumatic ring will be connected by non-kinking, non-collapsible, one-quarter inch hose to the upstream side of the seat pack oxygen inlet check valve. The sealing ring will operate at any pressure in range of forty five to one hundred p.s.i. Seal pressure hose will be routed immediately adjacent to present oxygen mask delivery hose.

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Attachment #2

Reason for Proposal

a. Helmet would provide an integrated facepiece which would enhance operational capability and safety by providing easy and positive opening and closing of the facepiece without detachment of this item.

b. Helmet would provide an integrated sun shield and facepiece guard.

c. Inner head harness is integral and supported by the hard shell and can be adjusted by the wearer during normal wear.

d. Improved comfort to the wearer in the glottis area due to improved design of the neck seal skirt.

e. Improved maintenance capability by eliminating critical facepiece seal required on bladder and cover assembly, or S-692 Cover and Bladder Assembly.

f. Improved maintenance capability by eliminating potential helmet bladder puncture by helmet hold-down attachments.

g. Improved inhalation and exhalation valve arrangement. New type exhalation valve provides opportunity for emergency control of exhalation valve if stuck open under pressure.

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Attachment #2

Reason for Proposal (continued)

h. Improved windblast protection resulting from integral design of facepiece and helmet shell.

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Attachment #3

a. Estimated Cost

Item One - Production Sample Helmet [ ] 25X1

Scope of Work

Modify current David Clark Company Model S-880 Helmet used with the A/P-22S-2 full pressure suit so that it will be compatible with the partial pressure suits utilized on the project.

Specific areas of modification are as follows:

I. Modify helmet mold to delete neck bearing, and provide for attachment of neck seal skirt.

II. Redesign the S-692 Helmet Bladder and Case Assembly neck seal skirt to adapt to the hard shell made from the mold in "I" above.

III. Redesign the helmet suspension so that the face seal can be eliminated without affecting support and adjustability.

IV. Provide for mounting the inspiratory and expiratory valves, hose connectors, electrical and communications leads.

V. Provide conductive coated face plate for normal and emergency face plate heat.

Item Two - Thirty (30) to fifty (50) each Production Helmets

Unit Price $ [ ] 25X1

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Attachment #3

b. Estimated Delivery

Item One - Sixty (60) days from date of authorization to proceed with ECP.

Item Two - First ten (10) helmets sixty (60) days from date of authorization to proceed with Item Two.

Additional twenty (20) helmets sixty (60) days from date of delivery of first ten (10).

Additional twenty (20) helmets thirty days from date of delivery of above quantity of twenty (20).

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25X1

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